Influx

TECHNOLOGY

User Documentation

Influx Product Pinouts

Influx Technology

1   The Rebel CT Logger (RC-4-5)

1.1 The USB Connector

The USB Connector is a USB Series "B" Receptacle Interface.
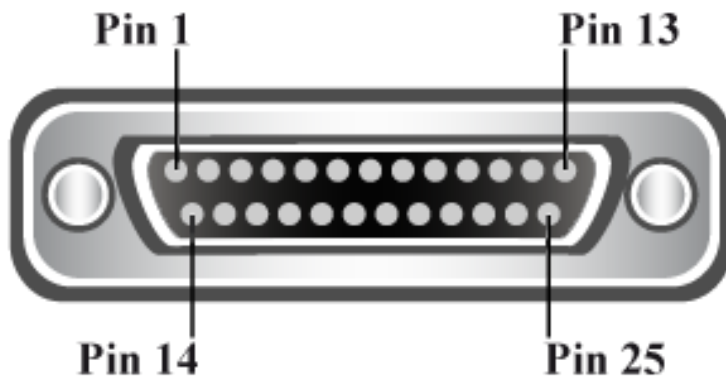

Pin No	Pin Function
Pin 1	VBUS USB supply voltage 5V
Pin 2	Data- line of USB this signal utilises NRZI line coding
Pin 3	Data+ line of USB this signal utilises NRZI line coding
Pin 4	Ground

Warning

- Don't drop the Logger onto the USB Connector with a USB Cable plugged in

1.2   The OBD & INST Connector

The OBD&INST connector is a Male 25 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Analog Input 3 - do not apply voltages outside of the -10 to +10V range
Pin 2	Ethernet LAN Receive -
Pin 3	Ethernet LAN Transmit -
Pin 4	Analog Input 1 - do not apply voltages outside of the -10 to +10V range
Pin 5	Wake-Up pin to wake logger from sleep mode (for use see Appendix 1)
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 0 (High Speed Bus) Low Signal
Pin 8	K-Line (1 wire bus) of ISO 9141
Pin 9	4.5-36V Supply Voltage
Pin 10	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 11	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 12	Digital Input or Output 0 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 13	CAN Bus 2 (Instrumentation Bus) Low Signal
Pin 14	Analog Input 2 - - do not apply voltages outside of the -10 to +10V range
Pin 15	Ethernet LAN Transmit +
Pin 16	Ethernet LAN Receive +
Pin 17	Analog Input 0 - - do not apply voltages outside of the -10 to +10V range
Pin 18	Analog Ground
Pin 19	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 20	CAN Bus 0 (High Speed Bus) High Signal
Pin 21	Ground - e.g. to be connected to pin 5 of the OBDII connector
Pin 22	Power Ground - e.g. to be connected to pin 4 of the OBDII connector
Pin 23	Digital Input or Output 3 (can also be uses as a switched power supply +Vd). When used as an input do not apply voltages outside of the 0 to +12V range
Pin 24	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 25	CAN Bus 2 (Instrumentation Bus) High Signal

Warning

- Don't short circuit or overload any Digital I/O e.g. If using Digital Input or Output 3 to supply power to power a K-Box or Rebel Dash, do not connect more than 1 K-Box to this output and be careful that no short circuit occurs.

Warning

- Overloading (I > 400mA) of Pin 10 (+4.5V Instrumentation) will result in a drop in the output voltage

Warning

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily

1.3   The GPS Connector

The Optional GPS connector is a Male SMB connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

1.4   The GPRS Connector

The Optional GPRS connector is a Male RP-SMA connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

1.5   The WiFi Connector

The Optional WiFi connector is a Female RP-SMA connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

1.6 The FlexRay Connector

The Optional FlexRay connector is a Male 15 pin 1.27mm Pitch Micro D connector.

Pin No	Pin Function
Pin 1	CAN Bus 4 (Ext 1) Low Signal
Pin 2	CAN Bus 4 (Ext 1) High Signal
Pin 3	CAN Bus 5 (Ext 2) Low Signal
Pin 4	CAN Bus 5 (Ext 2) High Signal
Pin 5	CAN Bus 6 (Ext 3) Low Signal
Pin 6	CAN Bus 6 (Ext 3) High Signal
Pin 7	LIN (Local Interconnect Network) Bus
Pin 8	+Vih Supply Voltage
Pin 9	FlexRay Bus 1 BP Signal
Pin 10	FlexRay Bus 1 BM Signal
Pin 11	FlexRay Bus 2 BP Signal
Pin 12	FlexRay Bus 2 BM Signal
Pin 13	Ground for the FlexRay Buses
Pin 14	Ground for the CAN and LIN Buses
Pin 15	Power Ground

Warning

- The connector needs to be tighted properly to make a proper connection and ensure reliable operation.

1.7   The Analog H-Box Connector

The Optional Analog H-Box connector is a Male 25 pin 1.27mm Pitch Micro D connector.

Pin No	Pin Function
Pin 1	Address 2 Signal
Pin 2	Analog Input 0 - do not apply voltages outside of the -20 to +20V range
Pin 3	Analog Input 1 - do not apply voltages outside of the -20 to +20V range
Pin 4	Analog Input 2 - do not apply voltages outside of the -20 to +20V range
Pin 5	Analog Input 3 - do not apply voltages outside of the -20 to +20V range
Pin 6	Analog Input 4 - do not apply voltages outside of the -20 to +20V range
Pin 7	Analog Input 5 - do not apply voltages outside of the -20 to +20V range
Pin 8	Analog Input 6 - do not apply voltages outside of the -20 to +20V range
Pin 9	Analog Input 7 - do not apply voltages outside of the -20 to +20V range
Pin 10	Address 1 Signal
Pin 11	Ground Address Signal Ground
Pin 12	Ground Address Signal Ground
Pin 13	Ground - for the +10.7V power supply
Pin 14	Analog Ground
Pin 15	Analog Ground
Pin 16	Analog Ground
Pin 17	Analog Ground
Pin 18	Analog Ground
Pin 19	Analog Ground
Pin 20	Analog Ground
Pin 21	Analog Ground
Pin 22	Analog Ground
Pin 23	Address 0 Signal
Pin 25	+10.7V

Warning

- The connector needs to be tighted properly to make a proper connection and ensure reliable operation.

2   The Rebel CT Logger (RC3-7)

2.1   The USB Connector

The USB Connector is a USB Series "B" Receptacle Interface.
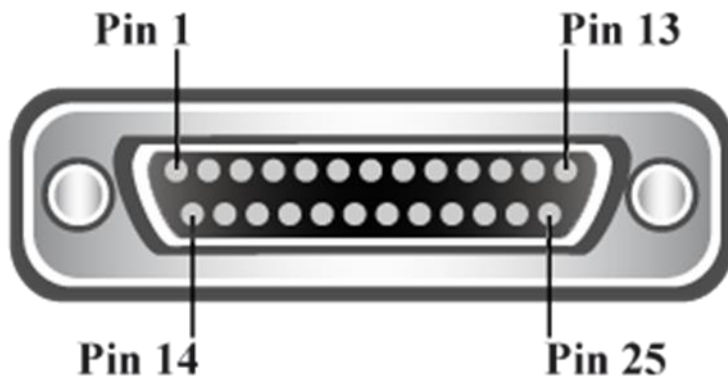

Pin No	Pin Function
Pin 1	VBUS USB supply voltage 5V
Pin 2	Data- line of USB this signal utilises NRZI line coding
Pin 3	Data+ line of USB this signal utilises NRZI line coding
Pin 4	Ground

Warning

- Don't drop the Logger onto the USB Connector with a USB Cable plugged in

2.2 The OBD & INST Connector

The OBD&INST connector is a Male 25 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Analog Ground
Pin 2	Analog Input 3 / Ethernet LAN Receive - when used and an Analog Input do not apply voltages outside of the -10 to +10V range
Pin 3	Analog Input 1 / Ethernet LAN Transmit - when used and an Analog Input do not apply voltages outside of the -10 to +10V range
Pin 4	Analog Ground
Pin 5	Wake-Up pin to wake logger from sleep mode (for use see Appendix 1)
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 0 (High Speed Bus) Low Signal
Pin 8	K-Line (1 wire bus) of ISO 9141
Pin 9	4.5-36V Supply Voltage
Pin 10	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 11	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 12	Digital Input or Output 0 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 13	Ground for the Digital Siganls
Pin 14	Analog Ground
Pin 15	Analog Input 2 / Ethernet LAN Receive + when used and an Analog Input do not apply voltages outside of the -10 to +10V range
Pin 16	Analog Input 0 / Ethernet LAN Transmit - when used and an Analog Input do not apply voltages outside of the -10 to +10V range
Pin 17	Analog Ground
Pin 18	Ground for the Wake Up signal
Pin 19	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 20	CAN Bus 0 (High Speed Bus) High Signal
Pin 21	Ground - e.g. to be connected to pin 5 of the OBDII connector
Pin 22	Power Ground - e.g. to be connected to pin 4 of the OBDII connector
Pin 23	Digital Input or Output 3 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 24	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 25	Ground for the Digital Signals

Warning

- Don't short circuit or overload any Digital I/O e.g. If using Digital Input or Output 3 to supply power to power a K-Box or Rebel Dash, do not connect more than 1 K-Box to this output and be careful that no short circuit occurs.

Warning

- Overloading (I > 400mA) of Pin 10 (+4.5V Instrumentation) will result in a drop in the output voltage

Warning

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily

2.3   The GPS Connector

The Optional GPS connector is a Male SMB connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

2.4   The GPRS Connector

The Optional GPRS connector is a Male RP-SMA connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

2.5   The WiFi Connector

The Optional WiFi connector is a Female RP-SMA connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

3   The Rebel LT Logger (RC4-5)

3.1   The USB Connector

The USB Connector is a USB Series "B" Receptacle Interface.

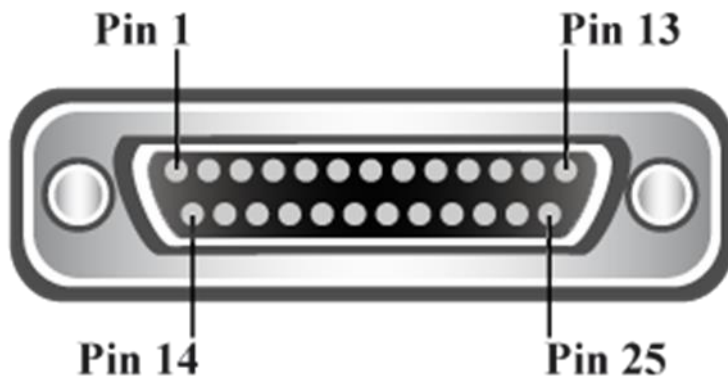| Pin No	Pin Function
Pin 1	VBUS USB supply voltage 5V
Pin 2	Data- line of USB this signal utilises NRZI line coding
Pin 3	Data+ line of USB this signal utilises NRZI line coding
Pin 4	Ground

Warning

- Don't drop the Logger onto the USB Connector with a USB Cable plugged in

Warning

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily

3.2   The OBD & INST Connector

The OBD&INST connector is a Male 25 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Analog Input 3 - do not apply voltages outside of the -10 to +10V range
Pin 2	Ethernet LAN Receive -
Pin 3	Ethernet LAN Transmit -
Pin 4	Analog Input 1 - do not apply voltages outside of the -10 to +10V range
Pin 5	Wake-Up pin to wake logger from sleep mode (for use see Appendix 1)
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 0 (High Speed Bus) Low Signal
Pin 8	K-Line (1 wire bus) of ISO 9141
Pin 9	4.5-36V Supply Voltage
Pin 10	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 11	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 12	Digital Input or Output 0 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 14	Analog Input 2 - do not apply voltages outside of the -10 to +10V range
Pin 15	Ethernet LAN Transmit +
Pin 16	Ethernet LAN Receive +
Pin 17	Analog Input 0 - do not apply voltages outside of the -10 to +10V range
Pin 18	Analog Ground
Pin 19	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 20	CAN Bus 0 (High Speed Bus) High Signal
Pin 21	Ground
Pin 22	Power Ground
Pin 23	Digital Input or Output 3 (can also be uses as a switched power supply +Vd). When used as an input do not apply voltages outside of the 0 to +12V range
Pin 24	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3

Warning

- Don't short circuit or overload any Digital I/O e.g. If using Digital Input or Output 3 to supply power to power a K-Box or Rebel Dash, do not connect more than 1 K-Box to this output and be careful that no short circuit occurs.

Warning

- Overloading (I > 400mA) of Pin 10 (+4.5V Instrumentation) will result in a drop in the output voltage

Warning

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily

3.3   The GPS Connector

The Optional GPS connector is a Male SMB connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

3.4   The GPRS Connector

The Optional GPRS connector is a Male RP-SMA connector.

Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

3.5   The WiFi Connector

The Optional WiFi connector is a Female RP-SMA connector.
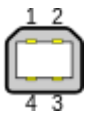
Pin No	Pin Function
Pin 1	Radio Frequency Signal Input
Pin 2	Ground

4 The Rebel LT Logger (LT 3-3, LT 3-4c)

4.1 The USB Connector

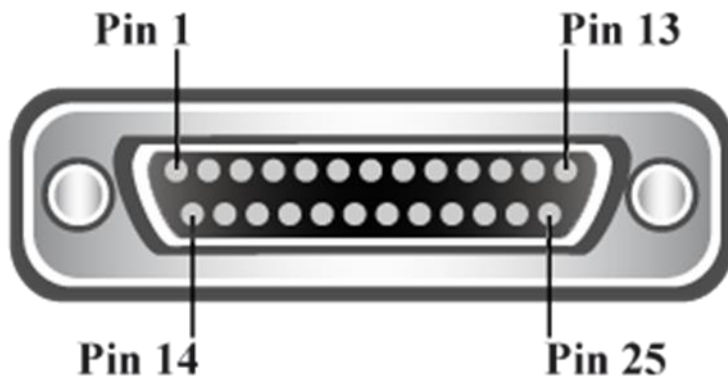The USB Connector is a USB Series "B" Receptacle Interface.

Pin No	Pin Function
Pin 1	VBUS USB supply voltage 5V
Pin 2	Data- line of USB this signal utilises NRZI line coding
Pin 3	Data+ line of USB this signal utilises NRZI line coding
Pin 4	Ground

> **Warning**
>
> • Don't drop the Logger onto the USB Connector with a USB Cable plugged in

4.2 The OBD Connector

The OBD Connector is a Male 25 pin Standard D Type connector.

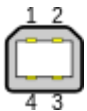| Pin No	Pin Function
Pin 1	Analog Ground
Pin 2	Analog Input 3 - do not apply voltages outside of the -10 to +10V range
Pin 3	Analog Input 1 - do not apply voltages outside of the -10 to +10V range
Pin 4	Analog Ground
Pin 5	Wake-Up pin to wake logger from sleep mode (for use see Appendix 1)
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 0 (High Speed Bus) Low Signal
Pin 8	K-Line (1 wire bus) of ISO 9141
Pin 9	4.5-36V Supply Voltage Supply Voltage
Pin 10	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 11	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +5V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 12	Digital Input or Output 0 - When used as an input do not apply voltages outside of the 0 to +5V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 13	Ground for the Digital Signals
Pin 14	Analog Ground
Pin 15	Analog Input 2 - do not apply voltages outside of the -10 to +10V range
Pin 16	Analog Input 0 - do not apply voltages outside of the -10 to +10V range
Pin 17	Analog Ground
Pin 18	Ground for the Wake Up Signal
Pin 19	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 20	CAN Bus 0 (High Speed Bus) High Signal
Pin 21	Ground - e.g. to be connected to pin 5 of the OBDII connector
Pin 22	Power Ground - e.g. to be connected to pin 4 of the OBDII connector
Pin 23	Digital Input or Output 3 - When used as an input do not apply voltages outside of the 0 to +5V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 24	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +5V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 25	Ground for the Digital Signals

Warning

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily

5 The Rebel XT ARM Logger (P3-19, B5-15)

5.1 The USB Connector

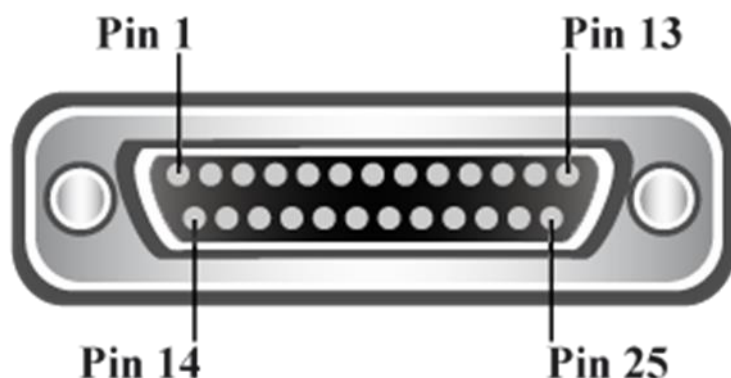The USB Connector is a USB Series "B" Receptacle Interface.

Pin No	Pin Function
Pin 1	VBUS USB supply voltage 5V
Pin 2	Data- line of USB this signal utilises NRZI line coding
Pin 3	Data+ line of USB this signal utilises NRZI line coding
Pin 4	Ground

Warning
- Don't drop the Logger onto the USB Connector with a USB Cable plugged in

5.2 The OBD Connector

The OBD&INST connector is a Male 25 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Digital Input 1 - Do not apply voltages outside of the 0 to +12V range
Pin 2	Digital Input 3 - Do not apply voltages outside of the 0 to +12V range
Pin 3	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 4	Ground for the +4.5V Instrumentation Supply Volatge
Pin 6	CAN Bus 4 (Ext 2) Low Signal
Pin 7	CAN Bus 3 (Ext 1) Low Signal
Pin 8	CAN Bus 2 (Instrumentation Bus) Low Signal
Pin 9	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 10	CAN Bus 0 (High Speed Bus) Low Signal
Pin 11	Ground - Ground for CAN Bus 2,3 and 5
Pin 12	K-Line (1 wire bus) of ISO 9141
Pin 13	4.5-36V Supply Voltage Supply Voltage
Pin 14	Wake Up and Digital Input 0 - Do not apply voltages outside of the 0 to +12V range.
Pin 15	Digital Input 2 - Do not apply voltages outside of the 0 to +12V range.
Pin 16	Ground for the digital signals
Pin 19	CAN Bus 4 (Ext 2) High Signal
Pin 20	CAN Bus 3 (Ext 1) High Signal
Pin 21	CAN Bus 2 (Instrumentation Bus) High Signal
Pin 22	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 23	CAN Bus 0 (High Speed Bus) High Signal
Pin 24	Ground - - e.g. to be connected to pin 5 of the OBDII connector
Pin 25	Power Ground - e.g. to be connected to pin 4 of the OBDII connector

Warning

• Don't short circuit or overload any Digital I/O

Warning

• Overloading (I > 400mA) of Pin 3 (+4.5V Instrumentation) will result in a drop in the output voltage

Warning

• Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily

6 The Rebel XT Logger (P3-5, P3-11, P3-17, P3-18c, B5-6, B5-9, B5-12, B5-14c)

6.1 The USB Connector

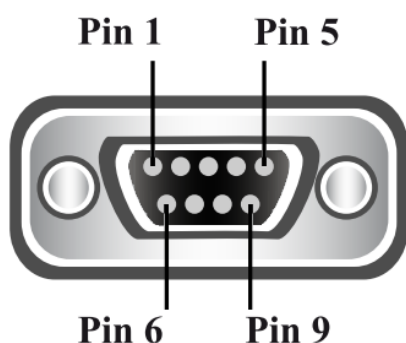The USB Connector is a USB Series "B" Receptacle Interface.

Pin No	Pin Function
Pin 1	VBUS USB supply voltage 5V
Pin 2	Data- line of USB this signal utilises NRZI line coding
Pin 3	Data+ line of USB this signal utilises NRZI line coding
Pin 4	Ground

Warning

- Don't drop the Logger onto the USB Connector with a USB Cable plugged in

6.2   The OBD Connector

The OBD Connector is a Male 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Ground - e.g. to be connected to pin 5 of the OBDII connector (This is Power Ground on XT P3-5 and B5-6 - e.g. to be connected to pin 4 of the OBDII connector)
Pin 2	Power Ground - e.g. to be connected to pin 4 of the OBDII connector
Pin 3	CAN Bus 0 (High Speed Bus) High Signal
Pin 4	K-Line (1 wire bus) of ISO 9141
Pin 5	CAN Bus 0 (High Speed Bus) Low Signal
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 8	LIN (Only on XT P3-5, P3-11, B5-6 & B5-9)
Pin 9	4.5-36V Supply Voltage Supply Voltage

Warning

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN, The Logger has dip switches inside that may be turned on if it is at the end of a CAN bus to allow the bus to be terminated easily
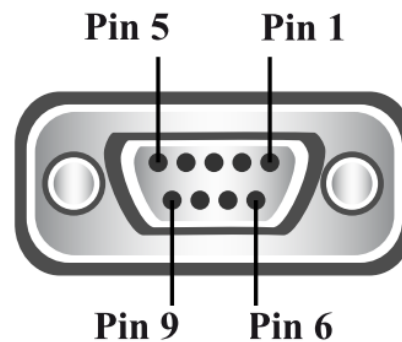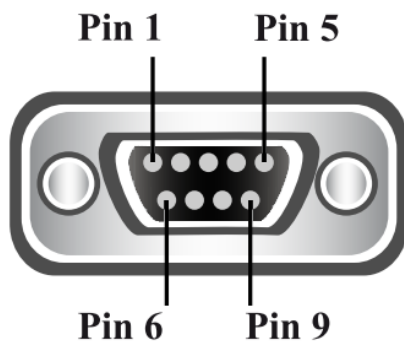
7   The K Box

7.1 The CAN Connectors

(2x DB9 CAN Connectors)

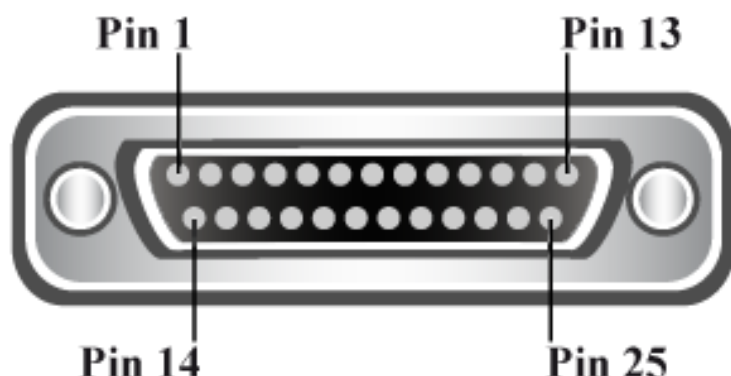The CAN connectors are 1x Male and 1x Female 9 pin Standard D Type connectors.

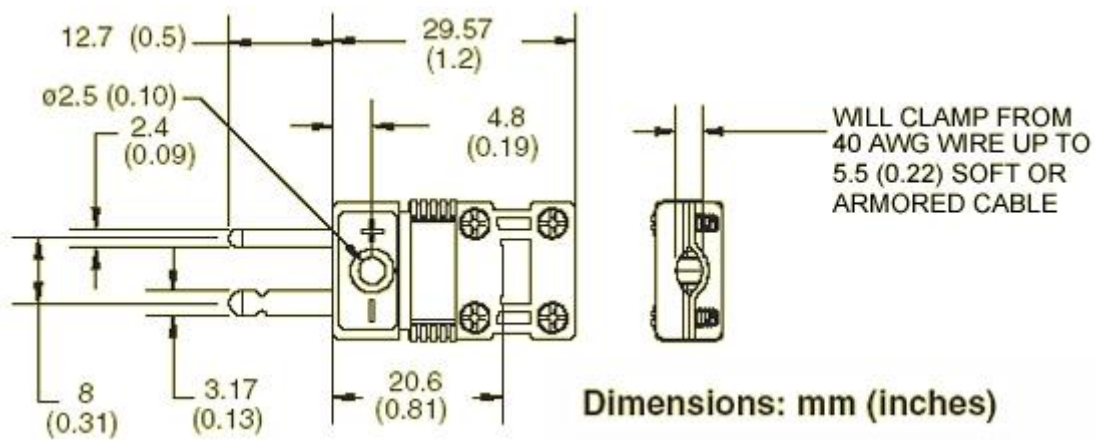| Pin No	Pin Function
Pin 1	Digital Output 4 or +4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 2	CAN Bus Low Signal
Pin 3	Ground
Pin 4	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 5	Power Ground
Pin 6	Digital Input or Output 3
Pin 7	CAN Bus High Signal
Pin 8	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 9	4.5-36V Supply Voltage

- Each End of the CAN bus must be terminated with a 120ohm resistor accros CAN H and CAN L.

7.2 The ADC Connector

The ADC connector is a Male 25 pin Standard D Type connector.

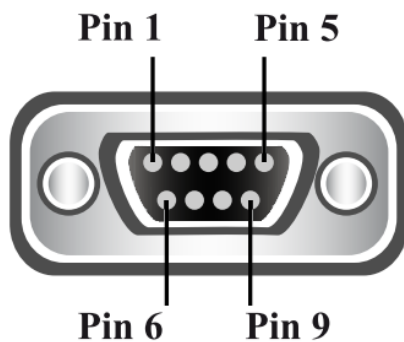| Pin No	Pin Function
Pin 1	+24V Output - ensure that current draw is not more than 75mA
Pin 2	+5V Output - ensure that current draw is not more than 75mA
Pin 5	Analog Ground
Pin 6	Analog Input 0 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 7	Analog Input 1 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 8	Analog Input 2 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 9	Analog Input 3 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 10	Analog Input 4 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 11	Analog Input 5 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 12	Analog Input 6 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 13	Analog Input 7 + - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 14	Ground Out
Pin 15	Ground Out
Pin 17	Analog Ground
Pin 18	Analog Input 0 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 19	Analog Input 1 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 20	Analog Input 2 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 21	Analog Input 3 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 22	Analog Input 4 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 23	Analog Input 5 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 24	Analog Input 6 - - do not apply voltages outside of the voltage range the K-Box is configured for.
Pin 25	Analog Input 7 - - do not apply voltages outside of the voltage range the K-Box is configured for.

7.3 The Thermocouple Connectors

The Thermocouple connectors on the K-Box are miniature size flat type sockets.

IEC Connector	Pin Function
Top	+ Signal from the Thermocouple
Bottom	K Signal from the Thermocouple

The dimensions of the Male Flat Type Miniature Size Thermocouple Plug that you would plug into it is as follows:

WILL CLAMP FROM 40 AWG WIRE UP TO 5.5 (0.22) SOFT OR ARMORED CABLE

Dimensions: mm (inches)

8   The Rebel Dash

8.1   The CAN/PWR Connector

The CAN/PWR connector is a Male 9 pin Standard D Type connector.

DB9	Pin Function
Pin 2	CAN Bus Low Signal
Pin 3	Ground (alternatively pin 5 may be used)
Pin 5	Ground (alternatively pin 3 may be used)
Pin 7	CAN Bus High Signal
Pin 9	Power Supply 10-32V

9   The Multi Connect Cable (C_MC)

The Rebel CT, CT Analog and CT Flexray

The Rebel LT

The Influx Multi Connect Cable can be used to connect a Rebel Logger to a multitude of other hardware such as:

- Influx's stackable instrumentation (K-Box)
- The Rebel Dash or other display
- ECUs/TCUs
- Other devices transmitting on a CAN bus such as sensors
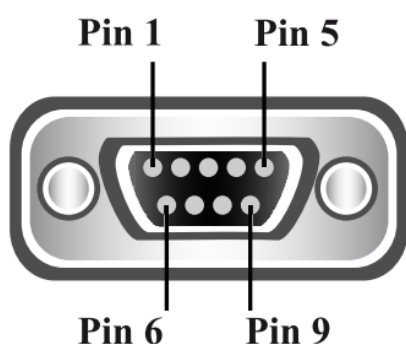- Analog and Digital Signals
- Ethernet Devices
- Power

The Multi Connect Cable is pictured below:

K-Box / Rebel Dash & CAN1

Power (e.g. via EOBD connector) and CAN0

Digital and Analog Inputs and Outputs

Ethernet Interface and CAN2 (Rebel CT)

9.1   The CAN0 / PWR Port

CAN0/PWR **(This Connector is used to power the Logger e.g. it could be powered via the diagnostics connector of a vehicle connected to the OBD2 to DB9 Cable)**
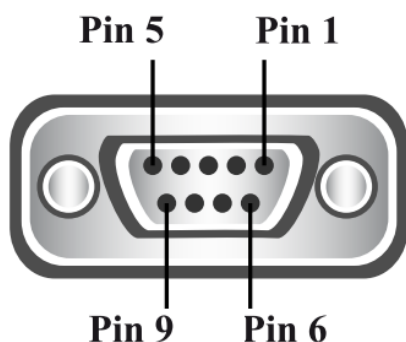The CAN0/PWR connector is a Male 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 2	CAN Bus 0 (High Speed Bus) Low Signal
Pin 3	Ground
Pin 4	K-Line (1 wire bus) of ISO 9141
Pin 5	Power Ground
Pin 7	CAN Bus 0 (High Speed Bus) High Signal
Pin 8	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 9	4.5-36V Supply Voltage

9.2 The AUX / CAN1 Port

AUX/CAN1 **(The port of the Multi Connect Cable that is normally used with the K-Box and Rebel Dash)**
The AUX/CAN1 connector is a Female 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 2	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 3	Ground
Pin 5	Ground
Pin 7	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 9	Power Supply Switched

Warning

- Don't short circuit or overload Power Supply Switched e.g. do not connect more than 1 K-Box to this output and be careful that no short circuit occurs.

9.2   The Dig & An Port

Dig & An (This Connector is used to connect Digital and Analog signals to the Logger)
The Dig & An connector is a Female 15 pin Standard D Type connector.

Pin No	Pin Function
Pin 2	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 3	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 4	Ground
Pin 6	Analog Ground
Pin 7	Analog Input 1 - do not apply voltages outside of the -10 to +10V range
Pin 8	Analog Input 3 - do not apply voltages outside of the -10 to +10V range
Pin 9	Digital Input or Output 0 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 10	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 11	Ground
Pin 13	Wake-Up pin to wake logger from sleep mode (for use see Appendix 1)
Pin 14	Analog Input 0 - do not apply voltages outside of the -10 to +10V range
Pin 15	Analog Input 2 - do not apply voltages outside of the -10 to +10V range

Warning

- Don't short circuit or overload any Digital I/O e.g. be careful that no short circuit occurs when using an I/O as an output.
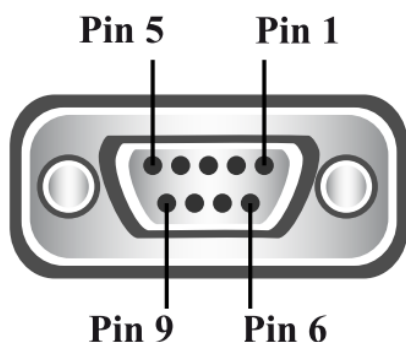
Warning

- Don't short circuit or overload Pin 10 (+4.5V Instrumentation)

9.3   The LAN Port

LAN (Used for connecting CAN2 and Ethernet to the Logger)
The LAN connector is a Female 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Ethernet LAN Receive -
Pin 2	CAN Bus 2 (Instrumentation Bus) Low Signal
Pin 3	Power Ground
Pin 4	Ethernet LAN Transmit +
Pin 5	Power Ground
Pin 6	Ethernet LAN Receive +
Pin 7	CAN Bus 2 (Instrumentation Bus) High Signal
Pin 8	Ethernet LAN Transmit -
Pin 9	Digital Input or Output 3 (can also be uses as a switched power supply +Vd). When used as an input do not apply voltages outside of the 0 to +12V range

Warning

- Don't short circuit or overload Digital Input or Output 3 e.g. if you us it to to supply power to power another device do not overload the power supply and be careful that no short circuit occurs.

9.4 The OBD & INST Port

OBD&INST (The multi connect cable attaches to the Logger via this connector)
The OBD&INST connector is a Female 25 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	Analog Input 3 - do not apply voltages outside of the -10 to +10V range
Pin 2	Ethernet LAN Receive -
Pin 3	Ethernet LAN Transmit -
Pin 4	Analog Input 1 - do not apply voltages outside of the -10 to +10V range
Pin 5	Wake-Up pin to wake logger from sleep mode (for use see Appendix 1)
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 0 (High Speed Bus) Low Signal
Pin 8	K-Line (1 wire bus) of ISO 9141
Pin 9	4.5-36V Supply Voltage
Pin 10	+4.5V Instrumentation Supply Voltage, ensure that current draw is not more than 100mA
Pin 11	Digital Input or Output 2 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 12	Digital Input or Output 0 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 13	CAN Bus 2 (Instrumentation Bus) Low Signal
Pin 14	Analog Input 2 - do not apply voltages outside of the -10 to +10V range
Pin 15	Ethernet LAN Transmit +
Pin 16	Ethernet LAN Receive +
Pin 17	Analog Input 0 - do not apply voltages outside of the -10 to +10V range
Pin 18	Analog Ground
Pin 19	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 20	CAN Bus 0 (High Speed Bus) High Signal
Pin 21	Ground
Pin 22	Power Ground
Pin 23	Digital Input or Output 3 (can also be uses as a switced power supply +Vd)
Pin 24	Digital Input or Output 1 - When used as an input do not apply voltages outside of the 0 to +12V range, when used as an Output ensure that current draw is not more than 100mA. More information on use of this pin can be found in Appendix 2 and 3
Pin 25	CAN Bus 2 (Instrumentation Bus) High Signal

Warning

- Don't short circuit or overload any Digital I/O e.g. If using Digital Input or Output 3 to supply power to power a K-Box or Rebel Dash, do not connect more than 1 K-Box to this output and be careful that no short circuit occurs.
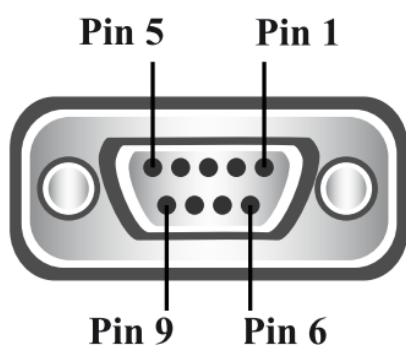
10   The OBDII to 9 way D Type Cable (C_MC_OBDII_4.5)

The Influx OBD to 9 way D Type Cable can be used to connect power and the Diagnostics CAN bus of a vehicle to the Rebel Dash or a K-Box. It can also be used to connect to the CAN0/PWR port of a Multi Connect Cable to connect power and the Diagnostics CAN bus of a vehicle to a current Rebel CT or LT Logger.
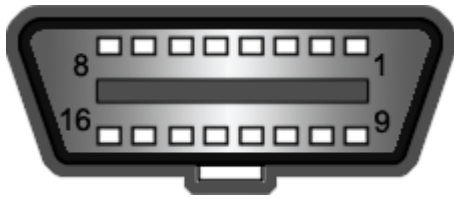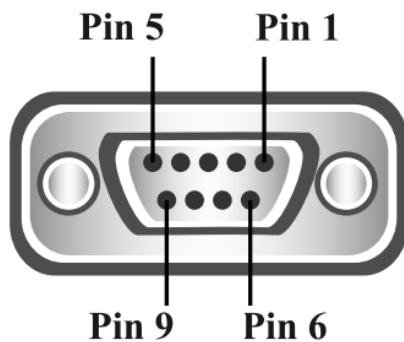
10.1 The 9 way D Type

The 9 way D Type Connector is a Female 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 2	CAN Bus 0 (High Speed Bus) Low Signal
Pin 3	Ground
Pin 4	K-Line (1 wire bus) of ISO 9141
Pin 5	Power Ground
Pin 7	CAN Bus 0 (High Speed Bus) High Signal
Pin 9	4.5-36V Supply Voltage

10.2 The OBD Connector

The OBD Connector is a Male 16 pin OBDII connector.

Pin No	Pin Function
Pin 4	Power Ground
Pin 5	Ground
Pin 6	CAN Bus 0 (High Speed Bus) High Signal
Pin 7	K-Line (1 wire bus) of ISO 9141
Pin 14	CAN Bus 0 (High Speed Bus) Low Signal
Pin 16	4.5-36V Supply Voltage

11 The OBDII to 9 way D Type Cable (C_MC_OBDII_F_4.5)

The Influx OBDII to 9 way D Type Cable can be used to connect power and the Diagnostics CAN bus of a vehicle to the Rebel Dash or a K-Box. It can also be used to connect to the CAN0/PWR port of a Multi Connect Cable to connect power and the Diagnostics CAN bus of a vehicle to a current Rebel CT or LT Logger.
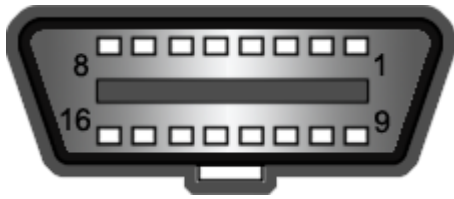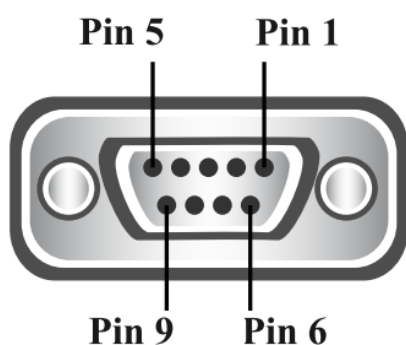
11.1 The 9 way D Type

The 9 way D Type Connector is a Female 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 2	CAN Bus 0 (High Speed Bus) Low Signal
Pin 3	Ground
Pin 4	K-Line (1 wire bus) of ISO 9141
Pin 5	Power Ground
Pin 7	CAN Bus 0 (High Speed Bus) High Signal
Pin 8	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 9	4.5-36V Supply Voltage

![Influx Technology logo]

11.2 The OBDII Connector

The OBDII Connector is a Male 16 pin OBDII connector.

Pin No	Pin Function
Pin 3	P CAN Bus 1 (Medium Speed Bus) High Signal
Pin 4	Power Ground
Pin 5	Ground
Pin 6	CAN Bus 0 (High Speed Bus) High Signal
Pin 7	K-Line (1 wire bus) of ISO 9141
Pin 11	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 14	CAN Bus 0 (High Speed Bus) Low Signal
Pin 16	4.5-36V Supply Voltage

12   The OBDII to 9 way D Type Cable (C_MC_OBDII_JLR_4.5)

The Influx OBDII to 9 way D Type Cable can be used to connect power and the Diagnostics CAN bus of a vehicle to the Rebel Dash or a K-Box. It can also be used to connect to the CAN0/PWR port of a Multi Connect Cable to connect power and the Diagnostics CAN bus of a vehicle to a current Rebel CT or LT Logger.
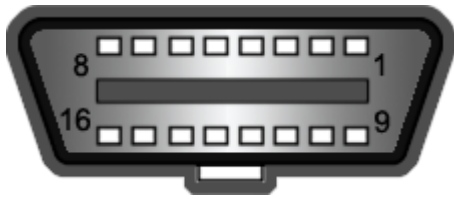
12.1 The 9 way D Type

The 9 way D Type Connector is a Female 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 1	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 2	CAN Bus 0 (High Speed Bus) Low Signal
Pin 3	Ground
Pin 4	K-Line (1 wire bus) of ISO 9141
Pin 5	Power Ground
Pin 7	CAN Bus 0 (High Speed Bus) High Signal
Pin 8	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 9	4.5-36V Supply Voltage

12.2 The OBDII Connector

The OBDII Connector is a Male 16 pin OBDII connector.

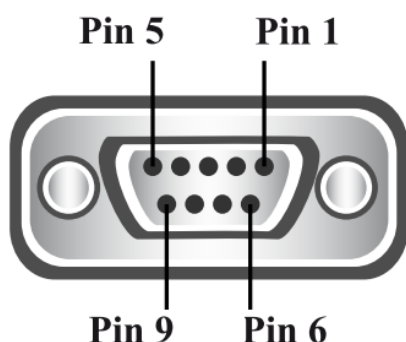| Pin No	Pin Function
Pin 2	P CAN Bus 1 (Medium Speed Bus) High Signal
Pin 4	Power Ground
Pin 5	Ground
Pin 6	CAN Bus 0 (High Speed Bus) High Signal
Pin 7	K-Line (1 wire bus) of ISO 9141
Pin 10	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 14	CAN Bus 0 (High Speed Bus) Low Signal
Pin 16	4.5-36V Supply Voltage

13   The OBDII Type B to 9 way D Type Cable

The Influx OBDII Type B to 9 way D Type Cable can be used to connect power and the Diagnostics CAN bus of a vehicle to the Rebel Dash or a K-Box. It can also be used to connect to the CAN0/PWR port of a Multi Connect Cable to connect power and the Diagnostics CAN bus of a vehicle to a current Rebel CT or LT Logger. Type B connectors may be plugged into both 12V and 24V Vehicles.
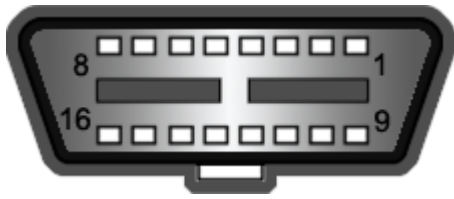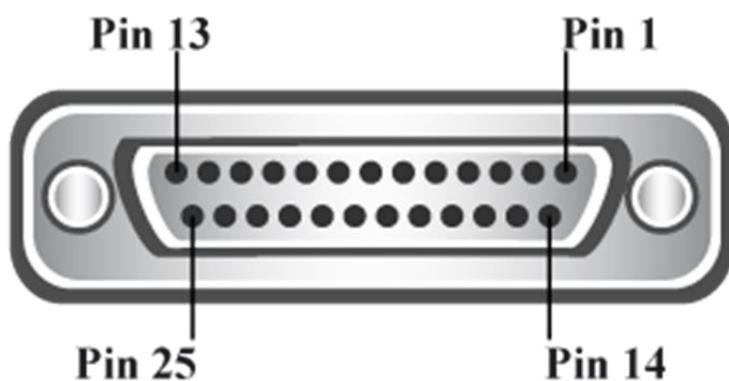
13.1 The 9 way D Type

The 9 way D Type Connector is a Female 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 2	CAN Bus 0 (High Speed Bus) Low Signal
Pin 3	Ground
Pin 4	K-Line (1 wire bus) of ISO 9141
Pin 5	Power Ground
Pin 7	CAN Bus 0 (High Speed Bus) High Signal
Pin 9	4.5-36V Supply Voltage

13.2 The OBDII Connector

The OBDII Connector is a Male 16 pin OBDII (Type B) connector.

Pin No	Pin Function
Pin 4	Power Ground
Pin 5	Ground
Pin 6	CAN Bus 0 (High Speed Bus) High Signal
Pin 7	K-Line (1 wire bus) of ISO 9141
Pin 14	CAN Bus 0 (High Speed Bus) Low Signal
Pin 16	4.5-36V Supply Voltage

14   The OBDII to 25 way D Type Cable

The Influx OBDII to 25 way D Type Cable can be used to connect power and the Diagnostics CAN bus of a vehicle to the current Rebel CT or LT Loggers directly.
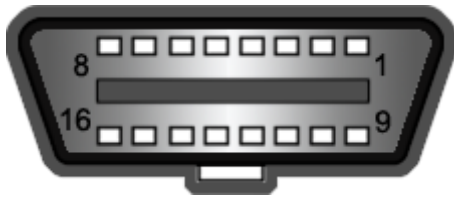
14.1 The 25 way D Type

The 25 way D Type Connector is a Female 25 pin Standard D Type connector.

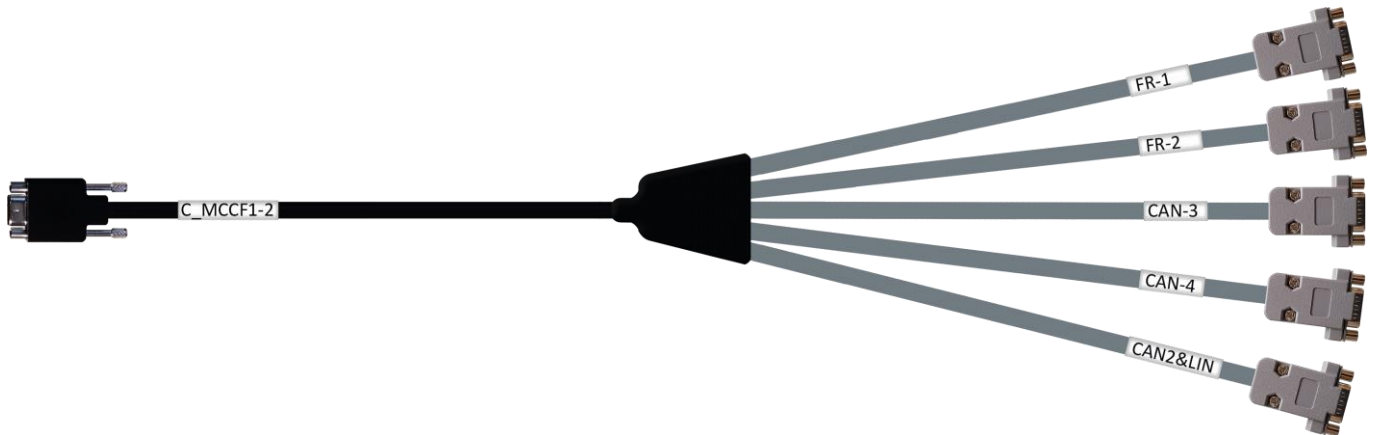| Pin No	Pin Function
Pin 6	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 7	CAN Bus 0 (High Speed Bus) Low Signal
Pin 8	K-Line (1 wire bus) of ISO 9141
Pin 9	4.5-36V Supply Voltage
Pin 19	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 20	CAN Bus 0 (High Speed Bus) High Signal
Pin 21	Ground
Pin 22	Power Ground

14.2 The OBDII Connector

The OBDII Connector is a Male 16 pin OBDII connector.

Pin No	Pin Function
Pin 3	CAN Bus 1 (Medium Speed Bus) High Signal
Pin 4	Power Ground
Pin 5	Ground
Pin 6	CAN Bus 0 (High Speed Bus) High Signal
Pin 7	K-Line (1 wire bus) of ISO 9141
Pin 11	CAN Bus 1 (Medium Speed Bus) Low Signal
Pin 14	CAN Bus 0 (High Speed Bus) Low Signal
Pin 16	4.5-36V Supply Voltage

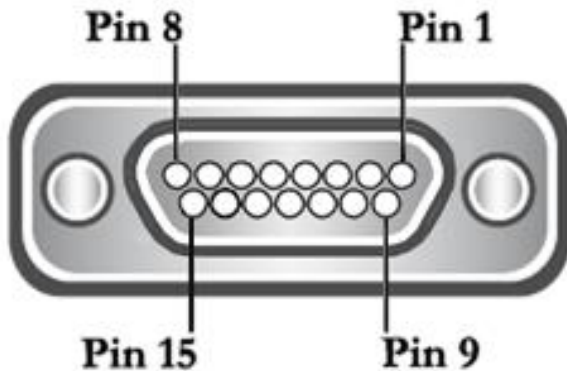# 15 The Flexray Breakout Cable (C_MCCF_1-2)

The Influx Flexray Breakout Cable can be used to connect any or all of the following buses to the Rebel CT Flexray:

- Flexray 1
- Flexray 2
- CAN 2
- CAN 3
- CAN 4
- LIN

15.1 The FlexRay Connector

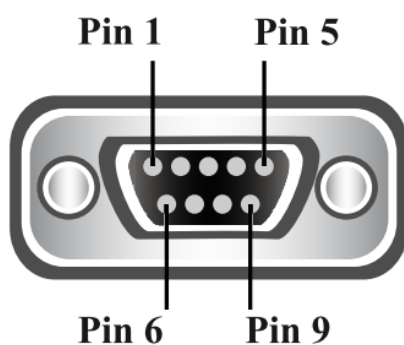The FlexRay connector is a Female 15 pin 1.27mm Pitch Micro D connector.

Pin No	Pin Function
Pin 1	CAN Bus 2 (Ext 1) Low Signal
Pin 2	CAN Bus 2 (Ext 1) High Signal
Pin 3	CAN Bus 3 (Ext 2) Low Signal
Pin 4	CAN Bus 3 (Ext 2) High Signal
Pin 5	CAN Bus 4 (Ext 3) Low Signal
Pin 6	CAN Bus 4 (Ext 3) High Signal
Pin 7	LIN (Local Interconnect Network) Bus
Pin 8	+Vih Supply Voltage
Pin 9	FlexRay Bus 1 BP Signal
Pin 10	FlexRay Bus 1 BM Signal
Pin 11	FlexRay Bus 2 BP Signal
Pin 12	FlexRay Bus 2 BM Signal
Pin 13	Ground for the FlexRay Buses
Pin 14	Ground for the CAN and LIN Buses
Pin 15	Power Ground

Warning

- The connector needs to be tighted properly to make a proper connection and ensure reliable operation.
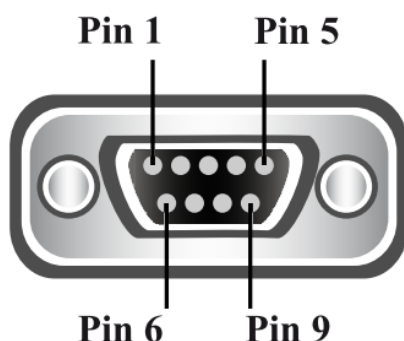
15.2 The FR-1 Connector

The FR-1 connector is a Male 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 2	FlexRay Bus 1 BM Signal
Pin 3	Ground for the FlexRay Buses
Pin 5	Power Ground
Pin 7	FlexRay Bus 1 BP Signal

15.3 The FR-2 Connector

The FR-2 connector is a Male 9 pin Standard D Type connector.

Pin No	Pin Function
Pin 2	FlexRay Bus 2 BM Signal
Pin 3	Ground for the FlexRay Buses
Pin 5	Power Ground
Pin 7	FlexRay Bus 2 BP Signal

15.4 The CAN-2 & LIN Connector

The CAN-2 & LIN Connector is a Female 9 pin Standard D Type connector.

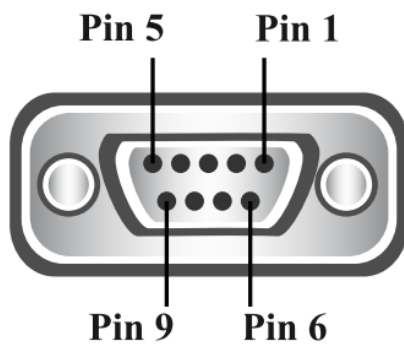| Pin No	Pin Function
Pin 2	CAN Bus 2 (Ext 1) Low Signal
Pin 3	Ground for the CAN and LIN Buses
Pin 4	LIN (Local Interconnect Network) Bus
Pin 5	Power Ground
Pin 7	CAN Bus 2 (Ext 1) High Signal

15.5 The CAN-3 Connector

The CAN-3 Connector is a Female 9 pin Standard D Type connector.

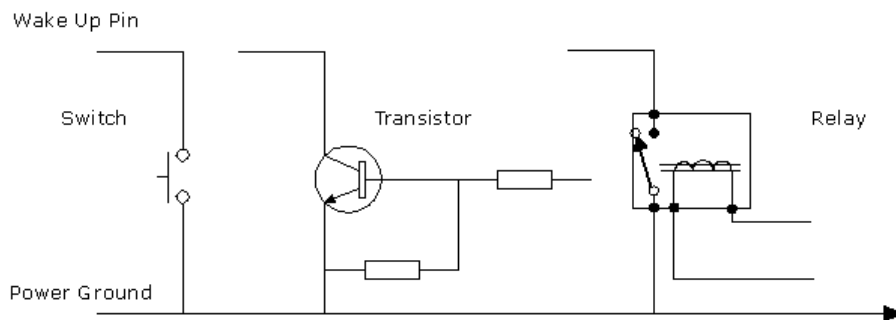| Pin No	Pin Function
Pin 2	CAN Bus 3 (Ext 2) Low Signal
Pin 3	Ground for the CAN and LIN Buses
Pin 5	Power Ground
Pin 7	CAN Bus 3 (Ext 2) High Signal

15.6 The CAN-4 Connector

The CAN-4 Connector is a Female 9 pin Standard D Type connector.

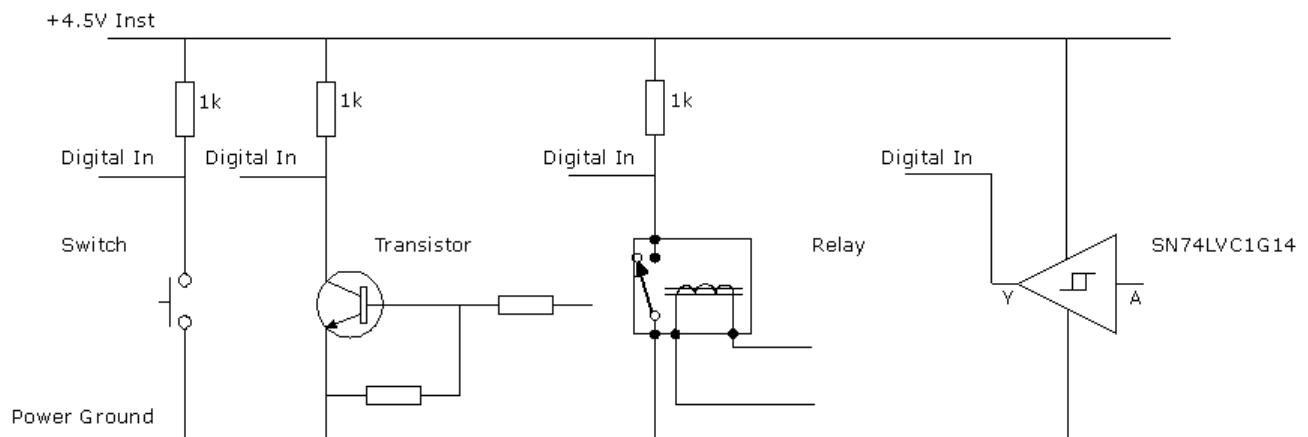| Pin No	Pin Function
Pin 2	CAN Bus 4 (Ext 3) Low Signal
Pin 3	Ground for the CAN and LIN Buses
Pin 5	Power Ground
Pin 7	CAN Bus 4 (Ext 3) High Signal

Appendix 1   The Wake Up Pin

The Loggers Wake up pin is held high and the logger can be woken up by switching the pin to ground in one of the three ways shown below, if the pin is switched to ground for longer than 20ms it will wake from sleep mode.

Appendix 2   Digital Input function

The Digital Input Output Pins will consider voltages below 1.6V to be low and above 2.5V to be high, examples of how you could utilise the I/O pins if configured as Inputs are shown below.

Appendix 3   Digital Output function

The Digital Input Output Pins will consider voltages below 1.6V to be low and above 2.5V to be high, examples of how you could utilise the I/O pins if configured as Inputs are shown below.